



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1430
Alexandria, Virginia 22313-1430
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,245	08/20/2001	Santos Burrola	DP-305008	5533

7590 09/11/2003
MARGARET A. DOBROWITSKY
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

KEASEL, ERIC S

ART UNIT PAPER NUMBER

3754

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,245

Applicant(s)

BURROLA ET AL.

Examiner

Eric Keasel

Art Unit

3754

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in Paper No. 4 is acknowledged. However, a search of the invention of Group I yielded a reference that anticipates the invention of Group II. Because there is no serious burden on the examiner, the restriction requirement is withdrawn. All claims are examined; no claims are withdrawn from consideration.

Drawings

2. The substituted drawings were received on 9 June 2003. These drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 18.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the spring having an outer diameter at least 50% greater than the diameter of the pocket (claim 6) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Suggestions

5. Claims 3-7 contain a different preamble than claim 1 from which they depend. It is suggested that "evaporative control" be deleted from claims 3-7 for consistency. In claim 5, line 3, it appears that "with" should be --in-- or --within--. In claim 9, it appears that "mnufactured" should be --manufactured--. Appropriate correction is suggested. However, the examiner contends that one of ordinary skill in the art would readily understand the metes and bounds of the claims regarding these suggested changes.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 6 requires the spring to have an outer diameter at least 50% greater than the diameter of the pocket. However, the outer diameter of the spring must be less than the diameter of the pocket because the spring is in this pocket (see Figs. 2 or 3). One of ordinary skill in the art would not be able to make and/or use a valve assembly that requires a spring to be larger than the pocket that it must go in.

Art Unit: 3754

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 appears to have the wrong dependency. As written, “the spring” and “the pocket” lack antecedent basis. It is vague and indefinite as to whether the claim should be dependent on claim 5 or if claims 1 and/or 4 should include recitations to provide proper antecedent basis for “the spring” and “the pocket. Also, it is vague and indefinite as to what is meant by a spring having an outer diameter at least 50% greater than the diameter of the pocket it goes in.

10. It should be noted that claim 6 can not be treated with an art rejection as the claim describes a physically impossible device.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3754

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by DuHack (US Patent Number 4,936,337).

DuHack discloses a valve assembly comprising: a valve body defining an inlet (28), a controlled outlet (29) and a passageway therebetween; a valve stop (48) and a valve seat (30) supported within said valve body in axial alignment with said controlled outlet; and a plunger (31) reciprocable between the valve stop and the valve seat to open and close said controlled outlet, said plunger further including a central bore (37) having an insert (32a or 32b) molded (see column 8, line 16) therein to define a dome-shaped stop-cushion (see the embodiments of Figs. 2 or 3) at an end proximal the valve stop and a valve tip (44) at an end proximal the valve seat; wherein the valve stop includes a plunger-impact surface formed of a non-conductive

Art Unit: 3754

material (i.e. plastic, see column 2, lines 15 and 16); wherein a solenoid actuator (33) is operable on said plunger to open and close said passageway.

DuHack also discloses a method of manufacturing the plunger reciprocally moveable within the valve assembly between the valve stop and the valve seat, the method comprising: providing a conductive elongate plunger body (31) having a central bore (37) formed therein; molding an insert within the plunger body to define a stop-cushion at an end proximal the valve stop and a valve tip proximal an end proximal the valve seat (see column 7, line 63 to column 8, line 20).

Re “evaporative control” in claims 3 and 7, DuHack is silent as to the intended use of the valve assembly. However, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore, this recitation in the preamble does not appear in independent claim 1.

14. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Numoto et al. (US Patent Number 5,246,199).

Numoto et al. disclose an evaporative control valve assembly comprising: a valve body (30) defining an inlet (30a), a controlled outlet (below valve seat 30c) and a passageway therebetween; a valve stop (5) and a valve seat (30c) supported within said valve body in axial

Art Unit: 3754

alignment with said controlled outlet; and a plunger (8) reciprocable between the valve stop and the valve seat to open and close said controlled outlet, said plunger further including a central bore having an insert (8a) therein to define a stop-cushion at an end proximal the valve stop and a valve tip at an end proximal the valve seat (see any of the Figs.); wherein said plunger includes a pocket formed in an end proximal the valve stop and a spring (9) received in the pocket that urges the plunger toward the valve seat to close the passageway.

Re “molded therein”, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over DuHack as applied to claim 1 above, and further in view of Frank et al. (US Patent Number 6,105,931).

DuHack fails to disclose the valve stop including a non-conductive insert received in an end proximal the plunger. Frank et al. disclose a non-conductive plastic (PTFE) insert (4a) received in the valve stop (8) in an end proximal the plunger (1) in a similar solenoid-actuated valve with inlet (10) and outlet (21) (see Fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the non-conductive plastic (PTFE) insert of Frank et al. with the valve assembly of DuHack in order to reduce the friction between the moving parts as taught by Frank et al. (see column 2, lines 15-41).

Art Unit: 3754


Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brandenburg et al., Wood, Larner, Sausner et al., Krause, Zabeck et al., Hensen, Krimmer et al., Kobayashi, Tackett et al., Engel et al., Jabcon, Cross et al., and Burrola et al. disclose similar solenoid-actuated valves, most of which have rubber inserts in the armature acting as the valve seat and/or a stop cushion.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (703) 308-6260. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


Eric Keasel
Examiner
Art Unit 3754